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OM protein - protein search, using sw model

Run on: August 28, 2002, 17:31:06 ; Search time 75.04 Seconds
(without alignments)
368.568 Million cell updates/sec

Title: US-09-502-984B-37
Perfect score: 1284
Sequence: 1 KFEKSKALLAARGPEELLCF.....RKNRLEEEVERLKQLVGR 249

Scoring table: BIOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 747574 seqs, 111073796 residues

Total number of hits satisfying chosen parameters: 747574

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A.GeneSeq_032802.*
1: /SIDS1/gcgdata/hold-geneseq/geneseqp-emb1/AA1980.DAT:*
2: /SIDS1/gcgdata/hold-geneseq/geneseqp-emb1/AA1981.DAT:*
3: /SIDS1/gcgdata/hold-geneseq/geneseqp-emb1/AA1982.DAT:*
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20: /SIDS1/gcgdata/hold-geneseq/geneseqp-emb1/AA2000.DAT:*
21: /SIDS1/gcgdata/hold-geneseq/geneseqp-emb1/AA2001.DAT:*
22: /SIDS1/gcgdata/hold-geneseq/geneseqp-emb1/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1060	82.6	211	21	AAAB21686
2	1060	82.6	225	21	AAAB21685
3	1060	82.6	438	21	AAAY44622
4	1060	82.6	488	18	AAW08349
5	1060	82.6	503	21	AAAB13012
6	1060	82.6	508	11	AAAB06512
7	1060	82.6	508	16	AAAR70032
8	1060	82.6	508	16	AAAR69503
9	1053	82.0	508	15	AAAR4518
10	1052	81.9	438	21	AAAY44623
11	875.5	68.2	265	15	AAAR50326

12	869.5	67.7	507	11	AAAR06511	EPO receptor sequ
13	869.5	67.7	507	15	AAAR47517	MPL EPO receptor.
14	869.5	67.7	507	16	AAAR69502	Mouse erythropoiet
15	862.5	67.2	507	15	AAAR50327	Mouse soluble EPO
16	171	13.3	625	22	AAU00377	Mouse thrombopoiet
17	167.5	13.0	117	21	AAV94338	Human cell surface
18	167	13.0	482	16	AAAR75941	Soluble murine MPL
19	166	12.9	633	16	AAAR79908	Type I MPL recepto
20	166	12.9	633	16	AAAR79053	Mouse type I MPL r
21	166	12.9	633	17	AAAR89948	Mouse type I MPL r
22	166	12.9	633	17	AAAR03513	Mouse type I MPL r
23	166	12.9	633	21	AAV52166	Mouse MPL type I r
24	164	12.8	626	16	AAAR75939	Murine myeloprolif
25	160	12.5	30	17	AAAR89963	Synthetic human er
26	158	12.3	33	21	AAAB21682	Colloid coil motif
27	150	11.7	30	17	AAAR89964	Synthetic human er
28	146	11.4	635	13	AAAR23970	MPL env protein w
29	146	11.4	635	16	AAAR75940	Human myeloprolife
30	146	11.4	635	22	AAU00376	Human thrombopoiet
31	145	11.3	30	17	AAAR89936	Synthetic human er
32	143	11.1	30	17	AAAR89965	Synthetic human er
33	142	11.1	32	17	AAAR89937	Synthetic human er
34	142	11.1	322	22	AAAB20440	Antibody 8860 biva
35	138	10.7	325	20	AAAB20438	Anti-FIX/FIXa anti
36	134.5	10.5	389	20	AAW70846	Human zcytor5 vari
37	134	10.4	30	17	AAAR98938	Synthetic human er
38	133.5	10.4	350	19	AAW55015	Amino acid sequenc
39	133.5	10.4	350	22	AAE00824	Human NR6 haemopo
40	133.5	10.4	389	20	AAW70848	Human zcytor5 vari
41	133.5	10.4	389	20	AAW70849	Human zcytor5 vari
42	133.5	10.4	389	20	AAW70844	Human zcytor5 vari
43	133.5	10.4	392	20	AAW70840	Human zcytor5 vari
44	133.5	10.4	408	19	AAW59805	Amino acid sequenc
45	133.5	10.4	408	20	AAV26338	Human U4 haematopo

ALIGNMENTS

RESULT 1
AAB21686 standard; peptide; 211 AA.
ID AAB21686;
AC AAB21686;
XX 21-DEC-2000 (first entry)
XX
DT Human mature erythropoietin receptor EPOR extracellular domain #2.
DE
XX
XX
KW Ligand; cell surface receptor; erythropoietin; EPOR; human;
KW protein design automation; PDA.
XX
XX
OS Homo sapiens.
XX
XX
PN WO200047612-A2.
XX
PD 17-AUG-2000.
XX
XX
PF 11-FEB-2000; 2000WO-US03665.
XX
XX
PR 11-FEB-1999; 99US-0120009.
XX
PR 29-APR-1999; 99US-0131674.
XX
XX
XX (XENC-) XENCOR INC.
XX
XX Luo P, Dahiyat B;
XX
XX WPI: 2000-549135/50.
XX
XX Screening for ligand analogs and agents which modulate ligand-receptor
XX binding, comprises adding a test ligand to a non-naturally occurring
XX cell surface receptor analog -

PS Example 1; Fig 8; 82pp; English.

XX The present invention relates to a method for screening for a ligand

CC analog, comprising adding a candidate ligand to a non-naturally occurring

CC cell surface receptor analog e.g. erythropoietin receptor (EPOR), and

CC determining the binding of the ligand to the analog. The present sequence

CC is a mature human erythropoietin receptor (EPOR) extracellular domain.

CC Protein Design Automation was carried out on the present sequence, so

CC that it may be used in the present invention as a cell surface receptor

CC analog.

CC

XX Sequence 211 AA;

SO

Query Match 82.6%; Score 1060; DB 21; Length 211;

Best Local Similarity 93.8%; Pred. No. 8.1e-99;

Matches 198; Conservative 11; Mismatches 2; Indels 0; Gaps 0;

QY 1 KEESKAALLAARGPEELCFERLEDIVCFEEAASAGVGPNGSPFSFOLEDEPWKLCRL 60

DB 1 KESKAALLAARGPEELCFERLEDIVCFEEAASAGVGPNGSPFSFOLEDEPWKLCRL 60

QY 61 HQAPTARGAIRPWCSLPTADTSSFPVPLELRLTAAAGAPRFRHRYHINEVLLDAPVGLVA 120

DB 61 hqaptargavrfwscslptadtsfvpplrvtlaasgpryhrvlnhnevlldapvglva 120

QY 121 RLADSGHVYIRWLPPETPMTSHIRFELDLSAGNGAGSVQRYELLEGRTECVLSNLKGR 180

DB 121 rladesghvylrwlppeptmshlryevdvsagngagsvqryellegrtecvlsnlgr 180

QY 181 TRITIAVRARMAEPSFGFWSAMSEPVSLLT 211

DB 181 trytfavrarmaepsfgfwsamsepvslilt 211

RESULT 2

AAB21685

ID AAB21685 standard; peptide; 225 AA.

XX

AC AAB21685;

XX

DT 21-DEC-2000 (first entry)

XX

DE Human mature erythropoietin receptor EPOR extracellular domain #1.

XX

KW Ligand; cell surface receptor; erythropoietin; EPOR; human.

XX

OS Homo sapiens.

XX

PN WO200047612-A2.

XX

PD 17-AUG-2000.

XX

PF 11-FEB-2000; 2000WO-US03665.

XX

PR 11-FEB-1999; 99US-0120009.

XX

PR 29-APR-1999; 99US-0131674.

XX

XX (XENC-) XENCOR INC.

XX

XX PA

XX PI Luo P, Dahiyat B;

XX

DR WPI: 2000-549135/50.

XX

XX Screening for ligand analogs and agents which modulate ligand-receptor

PT binding, comprises adding a test ligand to a non-naturally occurring

PT cell surface receptor analog -

XX

XX Example 1; Fig 8; 82pp; English.

XX

CC The present invention relates to a method for screening for a ligand

CC analog, comprising adding a candidate ligand to a non-naturally occurring

CC cell surface receptor analog e.g. erythropoietin receptor (EPOR), and

CC determining the binding of the ligand to the analog. The present sequence

CC is a mature human erythropoietin receptor (EPOR) extracellular domain.

CC This sequence may be used in the present invention as a cell surface

CC receptor analog.

CC

XX Sequence 225 AA;

SO

Query Match 82.6%; Score 1060; DB 21; Length 225;

Best Local Similarity 93.8%; Pred. No. 8.8e-99;

Matches 198; Conservative 11; Mismatches 2; Indels 0; Gaps 0;

QY 1 KEESKAALLAARGPEELCFERLEDIVCFEEAASAGVGPNGSPFSFOLEDEPWKLCRL 60

DB 10 KESKAALLAARGPEELCFERLEDIVCFEEAASAGVGPNGSPFSFOLEDEPWKLCRL 69

QY 61 HQAPTARGAIRPWCSLPTADTSSFPVPLELRLTAAAGAPRFRHRYHINEVLLDAPVGLVA 120

DB 70 hqaptargavrfwscslptadtsfvpplrvtlaasgpryhrvlnhnevlldapvglva 129

QY 121 RLADSGHVYIRWLPPETPMTSHIRFELDLSAGNGAGSVQRYELLEGRTECVLSNLKGR 180

DB 130 rladesghvylrwlppeptmshlryevdvsagngagsvqryellegrtecvlsnlgr 189

QY 181 TRITIAVRARMAEPSFGFWSAMSEPVSLLT 211

DB 190 trytfavrarmaepsfgfwsamsepvslilt 220

RESULT 3

AAV44622

ID AAV44622 standard; Protein; 438 AA.

XX

AC AAV44622;

XX

DT 07-APR-2000 (first entry)

XX

DE Truncated human EPOR(t439).

XX

KW Truncated human EPOR; erythropoietin receptor; hypersensitive EPOR(t439);

XX

KW mutant human EPOR; EPOR signaling; cancer; infectious disease; HIV;

XX

KW sickle cell anaemia; cytostatic; antimicrobial; antiviral;

XX

XX immunostimulant; anti-anaemic.

XX

OS Homo sapiens.

XX

PN WO9967360-A2.

XX

PD 29-DEC-1999.

XX

PF 25-JUN-1999; 99WO-CA00606.

XX

PR 25-JUN-1998; 98CA-2241576.

XX

PR 25-JAN-1999; 99CA-2260332.

XX

XX (HEMO-) HEMOSOL INC.

XX

XX PA

XX PI Bell D, Matthews KE, Mueller SG;

XX

DR WPI: 2000-136979/12.

XX

DR P-PSDB; AA249634.

XX

XX Serum free defined medium useful for the efficient culture of stem

PT cells used for production of hemoglobin -

XX

XX Example 6; Fig 9; 61pp; English.

XX

CC The present sequence is truncated human EPOR (erythropoietin receptor).

CC Transfection of constitutively active EPOR(t439) by electroporation into

CC a cytokine-dependent cell line supports cell population expansion in the

CC absence of exogenous cytokines. Mutant human EPOR is used in treatment of

CC disorders related to inadequate EPOR signaling. The transfected cells

CC may also be used in gene therapy to treat cancer, infectious diseases

CC (e.g. HIV), sickle cell anaemia, and conditions related to abnormal
 CC expression of erythropoietin.

XX
 SQ Sequence 438 AA;

Query Match 82.6%; Score 1060; DB 21; Length 438;
 Best Local Similarity 93.8%; Pred. No. 2.1e-98;
 Matches 198; Conservative 11; Mismatches 2; Indels 0; Gaps 0;

OY 1 KRESKAALLAANGPEELCTERLELDVCFEEAASAGVGPNGFSFQLEDEPMKLCRL 60
 |||
 DB 34 kteskaallaargpeellcfterledlvcfweeasagvpgnysfsyqledepwklcr1 93
 OY 61 HOAPTARGAIRPWCSLPTADTSSFPVPLERLTAASGAPRFHVIHINEVLLDAPYGLVA 120
 |||
 DB 94 hqaptargavrtwscslptadtsfvpplrlvtcaasgapryhvihinevllidapyglva 153
 OY 121 RLADSGHVIKWLPPPEPTMTSHIRFELDISAGNGAGSVQVVELLGRTECVLSNLGR 180
 |||
 DB 154 rladesghvltwlppeptmtshiryevdvsagngagsvqvellegrtcvlsnlgr 213
 OY 181 TRITIAVRARMAEPSCGFSWASMEPVSILT 211
 |||
 DB 214 trytlavarmaepsfgfwsawsepvsilt 244

RESULT 4

AAW08349
 ID AAW08349 standard; Protein; 488 AA.

XX
 AC AAW08349;

XX
 DT 14-MAR-1997 (first entry)

XX
 DE EpORFc fusion protein.

XX
 KW Receptor agonist; antibody; erythropoietin receptor; EpOR;

XX
 KW immunogen; antigen; metallothionein; promoter; IgG1; Fc;

XX
 KW anaemia; therapy.

XX
 OS Chimeric Homo sapiens;

XX
 OS Chimeric synthetic.

XX
 FH Key Location/Qualifiers

XX
 FT Domain 1..250

XX
 FT Cleavage-site 251..254

XX
 FT Domain 255..488

XX
 FT Domain /note="Factor Xa cleavage site"

XX
 FT Domain /label="Fc

XX
 FT Domain /note="human IgG1 Fc sequence"

XX
 PN WO9640231-A1.

XX
 PD 19-DEC-1996.

XX
 PF 07-JUN-1996; 96WO-US09613.

XX
 PR 07-JUN-1995; 95US-0474673.

XX
 PA (SMIK) SMITHKLINE BEECHAM CORP.

XX
 PI Erickson-Miller CL, Young PR;

XX
 DR WPI, 1997-051900/05.

XX
 DR N-PSDB; AAT48800.

XX
 PT Recombinant immunogen corresp. to dimeric form of a receptor - used

PT for generating antibodies able to act as receptor agonists, esp. of

PT erythropoietin receptor for treating anaemia

XX
 PS Example 1; Page 39-41; 83pp; English.

XX
 CC A fusion protein (AAW08349) encoded by plasmid mta1sEpORFc (AAT48800)
 CC comprises the human erythropoietin receptor (EpOR) extracellular
 CC domain fused (via a Factor Xa cleavage sequence) to the Fc portion
 CC of human IgG1. It can be expressed e.g. in transfected Drosophila
 CC S2 cells upon induction with copper sulphate. The cells secrete
 CC EpORFc as a dimeric molecule due to the affinity of the Fc moiety
 CC for itself. The dimeric receptor can be used as an immunogen to
 CC generate antibodies (monoclonal, polyclonal, chimeric, humanised)
 CC able to act as EOR agonists for use in treatment of anaemia.

XX
 SQ Sequence 488 AA;

Query Match 82.6%; Score 1060; DB 18; Length 488;
 Best Local Similarity 93.8%; Pred. No. 2.5e-98;
 Matches 198; Conservative 11; Mismatches 2; Indels 0; Gaps 0;

OY 1 KRESKAALLAANGPEELCTERLELDVCFEEAASAGVGPNGFSFQLEDEPMKLCRL 60
 |||
 DB 34 kteskaallaargpeellcfterledlvcfweeasagvpgnysfsyqledepwklcr1 93
 OY 61 HOAPTARGAIRPWCSLPTADTSSFPVPLERLTAASGAPRFHVIHINEVLLDAPYGLVA 120
 |||
 DB 94 hqaptargavrtwscslptadtsfvpplrlvtcaasgapryhvihinevllidapyglva 153
 OY 121 RLADSGHVIKWLPPPEPTMTSHIRFELDISAGNGAGSVQVVELLGRTECVLSNLGR 180
 |||
 DB 154 rladesghvltwlppeptmtshiryevdvsagngagsvqvellegrtcvlsnlgr 213
 OY 181 TRITIAVRARMAEPSCGFSWASMEPVSILT 211
 |||
 DB 214 trytlavarmaepsfgfwsawsepvsilt 244

RESULT 5

AAI3012
 ID AAI3012 standard; Protein; 503 AA.

XX
 AC AAI3012;

XX
 DT 08-DEC-2000 (first entry)

XX
 DE Q-tagged erythropoietin (EPO) receptor protein.

XX
 FT Site specific label; detection; interaction screening; transglutaminase;

XX
 FT erythropoietin receptor; EPO.

XX
 OS Synthetic.

XX
 OS WO200043492-A2.

XX
 PN 27-JUL-2000.

XX
 PD 20-JAN-2000; 2000WO-US01481.

XX
 PF 22-JAN-1999; 99US-0117327.

XX
 PR (SMIK) SMITHKLINE BEECHAM CORP.

XX
 PI Tew DG, Powell DJ, Meek TD, Chen W;

XX
 DR WPI, 2000-499222/44;

XX
 PT screening for a candidate compound for use in bioassays comprises

XX
 PT contracting the candidate molecule with a labelled modified protein and

XX
 PT detecting the label to identify interaction of the two molecules -

XX
 PT Example 4; Page 26; 49pp; English.

XX
 PS This invention relates to methods for the site specific modification of

XX

CC a protein, and to a method for screening for a candidate compound which
 CC interacts with first protein. The screening method comprises contacting
 CC the candidate molecule with a labelled modified first protein and
 CC detecting the label to identify interaction of the labelled modified
 CC first protein and candidate compound. The first protein is modified to
 CC contain a peptide, represented by sequence AAB13005. The method is
 CC used to label proteins at specific sites. The present sequence
 CC represents a Q-tagged erythropoietin (EPO) receptor constructed in an
 CC example of the method of the invention.

XX Sequence 503 AA;

Query Match 82.6%; Score 1060; DB 21; Length 503;
 Best Local Similarity 93.8%; Pred. No. 2.6e-98;
 Matches 198; Conservative 11; Mismatches 2; Indels 0; Gaps 0;

QY 1 KFSKKAALLAARPEELCTERLEDLVCFEEAASAGVGPGNFSFOLEDEPWKLCRL 60
 DB 34 KFSKKAALLAARPEELCTERLEDLVCFEEAASAGVGPGNFSFOLEDEPWKLCRL 93
 QY 61 HQAPFARGAIRFMCSLPTADTSSFPLELRLTAAAGAPRFRVYIHNEVLLDAPVGLVA 120
 DB 94 HQAPFARGAIRFMCSLPTADTSSFPLELRLTAAAGAPRFRVYIHNEVLLDAPVGLVA 153
 QY 121 RLADSGHVYIRWLPPPEPMTSHIRELDISAGNGAGSVQRYELLEGRTECVLSNLGR 180
 DB 154 RLADSGHVYIRWLPPPEPMTSHIRELDISAGNGAGSVQRYELLEGRTECVLSNLGR 213
 QY 181 TRITIAVRARMAEPFSGFGFSANSEPSYSLT 211
 DB 214 TRYTFAVRARMAPESFGFGFSANSEPSYSLT 244

RESULT 6

XX AAR06512 standard; protein; 508 AA.

XX AAR06512;

DT 04-JAN-1991 (first entry)

DE EPO receptor.

XX Erythropoietin; Diamond Blackfan anaemia; polycythemia vera.

OS Homo sapiens.

PN W09008822-A.

PD 09-AUG-1990.

PF 01-FEB-1990; 90WO-US00635.

PR 03-FEB-1989; 89US-0306503.

XX (GENE-) GENETICS INST INC.

PA (WHITE-) WHITEHEAD INST.

PI D'andrea A, Wong G;

DR WPI; 1990-260931/34.

DR N-PSDB; AAQ05748.

PT Erythropoietin receptor and gene - used for developing reagents

PS and systems to control and study erythropoiesis.

XX Disclosure; Fig 2; 53pp; English.

XX The sequence was deduced from DNA obtd. from a clone isolated from

CC a commercially available human genomic cDNA library in phage

CC Lambda fix (Stratagene). The sequence encodes a type I trans-

CC membrane protein with binding affinity for EPO. The gene and

CC recombinant EPO receptor produced on expression of the DNA are
 CC used to develop reagents and systems to control and study
 CC erythropoiesis. It is believed that the EPO receptor is dys-
 CC functional in individuals with Diamond Blackfan anaemia, and may
 CC be hyperactive in polycythemia vera.
 CC See also AAR06511 (murine EPO receptor).

XX Sequence 508 AA;

Query Match 82.6%; Score 1060; DB 11; Length 508;
 Best Local Similarity 93.8%; Pred. No. 2.6e-98;
 Matches 198; Conservative 11; Mismatches 2; Indels 0; Gaps 0;

QY 1 KFSKKAALLAARPEELCTERLEDLVCFEEAASAGVGPGNFSFOLEDEPWKLCRL 60
 DB 34 KFSKKAALLAARPEELCTERLEDLVCFEEAASAGVGPGNFSFOLEDEPWKLCRL 93
 QY 61 HQAPFARGAIRFMCSLPTADTSSFPLELRLTAAAGAPRFRVYIHNEVLLDAPVGLVA 120
 DB 94 HQAPFARGAIRFMCSLPTADTSSFPLELRLTAAAGAPRFRVYIHNEVLLDAPVGLVA 153
 QY 121 RLADSGHVYIRWLPPPEPMTSHIRELDISAGNGAGSVQRYELLEGRTECVLSNLGR 180
 DB 154 RLADSGHVYIRWLPPPEPMTSHIRELDISAGNGAGSVQRYELLEGRTECVLSNLGR 213
 QY 181 TRITIAVRARMAEPFSGFGFSANSEPSYSLT 211
 DB 214 TRYTFAVRARMAPESFGFGFSANSEPSYSLT 244

RESULT 7

XX AAR70032 standard; Protein; 508 AA.

XX AAR70032;

DT 07-OCT-1995 (first entry)

DE Human erythropoietin receptor.

XX Erythropoietin receptor; extracellular domain.

OS Homo sapiens.

FN Key Location/Qualifiers

FT Domain 25..250 /note="extracellular domain"

FT Domain 9..83 /note="extracellular domain"

FT Misc-difference 25..29 /note="forward primer AAQ82991 specific site"

FT Misc-difference 222..226 /note="reverse primer AAQ82992 specific site"

PN W09505469-A.

PD 23-FEB-1995.

PF 15-AUG-1994; 94WO-US09298.

PR 16-AUG-1993; 93US-0106815.

XX (LEEJ/) LEE J Y.

PI Lee JY;

DR WPI; 1995-098767/13.

DR N-PSDB; AAQ82990.

PT New pure human erythropoietin receptor fragment - obtd. by

PT expression as a fusion protein having a thrombin proteolytic

PT cleavage site.

XX XX Disclosure; Page 27-29; 42pp; English.
 PS PS
 XX XX
 CC CC The full-length erythropoietin receptor (EPO-R) is given.
 CC Extracellular domains are expressed from vector plasmid pGEX-2T as
 CC fusion proteins with glutathione-S-transferase. The domains are
 CC used for investigating the structure of the EPO-R and for
 CC identifying factors involved in regulating differentiation and
 CC proliferation mechanisms in erythroid progenitor cells. They can
 CC also be used for identifying and quantitating EPO and EPO-R as well
 CC as in understanding haematopoietic malignancy and some
 CC cardiovascular system disorders.
 CC
 XX XX
 SQ Sequence 508 AA;
 Query Match 82.6%; Score 1060; DB 16; Length 508;
 Best Local Similarity 93.8%; Pred. No. 2.6e-98;
 Matches 198; Conservative 11; Mismatches 2; Indels 0; Gaps 0;
 QY 1 KFSKRAALLAAGPPELICTERLEEDLVCFEEAASAGVGPNGFSFPLEDEPMTKRL 60
 Db 34 kfskaallaagppeilictelrleedlvcfweaasagvpgpnysfsyqledepwklcrl 93
 QY 61 HOAPFARGAIRPWCSLPTADTSSFPVPLELRLTAASGAPRFRHVIHINEVLLDAPYGLVA 120
 Db 94 hgapfargavrfwscslptadtsfvpplrtaasagapryhvihinevllldapyglva 153
 QY 121 RLADSSGHVIVIMLPPEPTPMTSHIRFELDISAGNAGSVORVELLEGRTCEVLNLRGR 180
 Db 154 rladesghvirlwlppeptpmtshirfyevdvasgnagsgvgrvellegrtcevlslnlgr 213
 QY 181 TRITTAVRARMAEPSPGFGFWSAMSEPVSLT 211
 Db 214 tryttaavrarmepsfgfgrfwsawsepsvslt 244
 RESULT 8
 AAR69503
 ID AAR69503 standard; Protein; 508 AA.
 AC AAR69503;
 XX XX
 DT 11-AUG-1995 (first entry)
 XX XX
 DE Human erythropoietin receptor.
 XX XX
 KW Erythropoietin receptor; anemia therapy; diagnostic.
 XX XX
 OS Homo sapiens.
 XX XX
 FH Key Location/Qualifiers
 FT Peptide 1..24
 FT Protein /note= "signal peptide"
 FT /note= "mature protein"
 FT Modified-site 76..79
 FT /note= "N-glycosylation site"
 FT Domain 251..272
 FT /note= "transmembrane region"
 XX XX
 PN US5378808-A.
 XX XX
 PD 03-JAN-1995.
 XX XX
 PF 03-FEB-1989; 89US-0306503.
 XX XX
 PR 03-FEB-1989; 89US-0306503.
 PR 25-MAR-1991; 91US-0678877.
 PR 10-JUN-1993; 93US-0075069.
 XX XX
 PA (GENY) GENETICS INST INC.
 XX XX

PI D'andrea A, Jones SS, Wong GG;
 XX XX
 DR WPI: 1995-051310/07.
 DR N-PSDB: AA081892.
 XX XX
 PR New recombinant erythropoietin receptor polypeptide(s) - used for
 PR detection, purification, and therapy and for prodn. of antibodies for
 PR detection and therapy
 XX XX
 PS Claim 2; Fig 9; 24pp; English.
 XX XX
 CC The sequence is that of a 55-kDa human erythropoietin receptor. The
 CC receptor polypeptide may be used in purification and detection of
 CC erythropoietin, and in production of antibodies for anemia therapy.
 CC The polypeptide may also be used for treating individuals
 CC who are hypersensitive to erythropoietin or who have elevated
 CC erythropoietin levels. They may be used in therapy of e.g. primary
 CC or secondary proliferative polycythemia.
 CC
 XX XX
 SQ Sequence 508 AA;
 Query Match 82.6%; Score 1060; DB 16; Length 508;
 Best Local Similarity 93.8%; Pred. No. 2.6e-98;
 Matches 198; Conservative 11; Mismatches 2; Indels 0; Gaps 0;
 QY 1 KFSKRAALLAAGPPELICTERLEEDLVCFEEAASAGVGPNGFSFPLEDEPMTKRL 60
 Db 34 kfskaallaagppeilictelrleedlvcfweaasagvpgpnysfsyqledepwklcrl 93
 QY 61 HOAPFARGAIRPWCSLPTADTSSFPVPLELRLTAASGAPRFRHVIHINEVLLDAPYGLVA 120
 Db 94 hgapfargavrfwscslptadtsfvpplrtaasagapryhvihinevllldapyglva 153
 QY 121 RLADSSGHVIVIMLPPEPTPMTSHIRFELDISAGNAGSVORVELLEGRTCEVLNLRGR 180
 Db 154 rladesghvirlwlppeptpmtshirfyevdvasgnagsgvgrvellegrtcevlslnlgr 213
 QY 181 TRITTAVRARMAEPSPGFGFWSAMSEPVSLT 211
 Db 214 tryttaavrarmepsfgfgrfwsawsepsvslt 244
 RESULT 9
 AAR47518
 ID AAR47518 standard; Protein; 508 AA.
 AC AAR47518;
 XX XX
 DT 24-JUN-1994 (first entry)
 XX XX
 DE Human EPO receptor.
 XX XX
 KW Erythropoietin receptor; recombinant; murine; anaemia.
 XX XX
 OS Homo sapiens.
 XX XX
 FH Key Location/Qualifiers
 FT Peptide 1..24
 FT Protein /note= "signal peptide"
 FT /note= "mature EPO receptor"
 FT Region 251..272
 FT /note= "putative transmembrane domain"
 XX XX
 PN US5278065-A.
 XX XX
 PD 11-JAN-1994.
 XX XX
 PF 03-FEB-1989; 89US-0306503.
 XX XX
 PR 03-FEB-1989; 89US-0306503.
 PR 25-MAR-1991; 91US-0678877.
 XX XX

XX (CHIL-) CHILDRENS MEDICAL CENT.
 PA (GEM) GENETICS INST INC.
 PA (MHED) WHITEHEAD INST BIOMEDICAL RES.
 PI D'andrea A, Jones SS, Wong GG;
 XX WPI; 1994-025409/03.
 DR N-PSDB; AAQ53995.
 XX Recombinant DNA encoding erythropoietin receptor - used to
 PT develop prods. for study, treatment or diagnosis of disorders in
 PT which receptor is dysfunctional
 XX
 PS Disclosure: Fig 9; 24pp; English.
 XX Mouse erythroleukemia (MEL) cells were used to construct a cDNA
 CC library. The cDNA was used to transfect COS-1 cells and these were
 CC screened for radioiodinated erythropoietin (EPO) binding to isolate
 CC cDNA encoding the EPO receptor. This cDNA was used as a probe to
 CC screen a human genomic cDNA library to obtain DNA encoding the human
 CC EPO receptor. The cDNA may be used to study, treat or diagnose
 CC disorders in which the EPO receptor is dysfunctional. The EPO
 CC receptor may also be used to raise antibodies or for treating
 CC hypersensitivity to EPO or who have elevated levels of EPO. The port.
 CC is pref. used for treating anaemias, primary proliferative polycythemia
 CC and secondary polycythemia.
 CC See also AAR47517.
 CC
 SQ Sequence 508 AA;

Query Match 82.0%; Score 1053; DB 15; Length 508;
 Best Local Similarity 92.9%; Pred. No. 1.3e-97;

Matches 196; Conservative 12; Mismatches 3; Indels 0; Gaps 0;

QY 1 KFSKALLAARGPEELCTFERLEDVCFEEBASAGVPGNFSFQLEDEPWKLCRL 60
 |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
 Db 34 kfeskaallaargpeelctferledvctweeasagvgpnysfsgyledepwklcrl 93
 QY 61 HQAPTARGAIRFWCSLPTADTSSFVPLELRITAAAGAPRFRHYIHNEVYLLDAPVGLA 120
 |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
 Db 94 hqaptargairfwcslpdatsstfvplelrvtlaasagpryhrvthinevylldapvglva 153
 QY 121 RLDESGHVYIRMLPPEPTMTSHIRELDISAGNGAGSVQRYELLEGRTECVLSNLRGR 180
 |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
 Db 154 rladesghvylrwlppelptmtshirylvdvsagngsvqrveillegrtecvlsnltgr 213
 QY 181 TRITIAVRARMAEPSPFGFWSANSEPVSLT 211
 |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
 Db 214 trytfavrarmaepsfgfwsawsepsyllt 244

RESULT 10

AAR44623
 ID AAY44623 standard; Protein; 438 AA.

AC AAY44623;

DT 07-APR-2000 (first entry)

DE R154C truncated human EpOR(t439).

XX Truncated human EpOR; erythropoietin receptor; hypersensitive EpOR(t439);

KW mutant human EpOR; EpOR signalling; cancer; infectious disease; HIV;

KW sickle cell anemia; cytostatic; antimicrobial; antiviral;

XX Immunostimulant; anti-anaemic.

XX Homo sapiens.

OS Homo sapiens.

FT Key Location/Qualifiers
 MISC-difference 154 /note= "Wild type Arg substituted by Cys"

XX MO9967360-A2.
 PN
 XX
 XX 29-DEC-1999.
 PD
 XX
 XX 25-JUN-1999; 99WO-CA00606.
 PF
 XX
 XX 25-JUN-1998; 98CA-2241576.
 PR
 XX 25-JAN-1999; 99CA-2260332.
 XX
 PA (HEMO-) HEMOSOL INC.
 PI Bell D, Matthews KE, Mueller SG;
 XX
 XX WPI; 2000-136979/12.
 DR N-PSDB; AAZ49636.
 XX
 PT Serum free defined medium useful for the efficient culture of stem
 PT cells used for production of hemoglobin -
 XX
 PS Example 6; Fig 10; 61pp; English.
 XX The present sequence is R154C truncated human EpOR (erythropoietin
 CC receptor). Transfection of constitutively active EpOR(t439; R154C) by
 CC electroporation into a cytokine-dependent cell line supports cell
 CC population expansion in the absence of exogenous cytokines. Mutant human
 CC EpOR is used in treatment of disorders related to inadequate EpOR
 CC signaling. The transfected cells may also be used in gene therapy to treat
 CC cancer, infectious diseases (e.g. HIV), sickle cell anemia, and
 CC conditions related to abnormal expression of erythropoietin.
 CC
 SQ Sequence 438 AA;

Query Match 81.9%; Score 1052; DB 21; Length 438;
 Best Local Similarity 93.4%; Pred. No. 1.4e-97;

Matches 197; Conservative 11; Mismatches 3; Indels 0; Gaps 0;

QY 1 KFSKALLAARGPEELCTFERLEDVCFEEBASAGVPGNFSFQLEDEPWKLCRL 60
 |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
 Db 34 kfeskaallaargpeelctferledvctweeasagvgpnysfsgyledepwklcrl 93
 QY 61 HQAPTARGAIRFWCSLPTADTSSFVPLELRITAAAGAPRFRHYIHNEVYLLDAPVGLA 120
 |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
 Db 94 hqaptargairfwcslpdatsstfvplelrvtlaasagpryhrvthinevylldapvglva 153
 QY 121 RLDESGHVYIRMLPPEPTMTSHIRELDISAGNGAGSVQRYELLEGRTECVLSNLRGR 180
 |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
 Db 154 rladesghvylrwlppelptmtshirylvdvsagngsvqrveillegrtecvlsnltgr 213
 QY 181 TRITIAVRARMAEPSPFGFWSANSEPVSLT 211
 |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
 Db 214 trytfavrarmaepsfgfwsawsepsyllt 244

RESULT 11

AAR50326
 ID AAR50326 standard; Protein; 265 AA.

AC AAR50326;

DT 19-OCT-1994 (first entry)

DE Mouse soluble EPO receptor protein fragment.

XX Murine; soluble; erythropoietin; EPO; receptor protein; sEPO-R; drug;

KW antigen; diagnostic agent; biochemical reagent.

XX Mus musculus.

OS Mus musculus.

FT Key Location/Qualifiers

FT Peptide 1..25 /note= "Signal peptide"

FT Protein 26..265
 FT /note= "Mature EPO-R fragment"
 FT JP06038787-A.
 PN 15-FEB-1994.
 PD 04-MAR-1992; 92JP-0082865.
 XX 04-MAR-1992; 92JP-0082865.
 XX 04-MAR-1992; 92JP-0082865.
 PR (SNOW) SNOW BRAND MILK PROD CO LTD.
 PA WPI; 1994-094847/12.
 DR N-PSDB; AAQ44853.
 XX
 XX Soluble erythropoietin receptor protein - and DNA coding for
 PT SEPO-R, useful as diagnostic reagent
 PS
 XX Disclosure: Page 5-6; 9pp; Japanese.
 XX
 CC This sequence represents a fragment of the murine soluble erythro-
 CC poietin (EPO) receptor protein (SEPO-R). This protein is able to
 CC bind to EPO and has antigenicity as an EPO receptor. The molecular
 CC weight of the full length protein is pref 33 or 29 kd. The protein
 CC is useful as a drug, as a diagnostic agent and a biochemical reagent.
 XX
 SQ Sequence 265 AA;

Query Match 68.2%; Score 875.5; DB 15; Length 265;
 Best Local Similarity 77.1%; Pred. No. 4.6e-80;
 Matches 165; Conservative 22; Mismatches 26; Indels 1; Gaps 1;

QY 1 KFSKAAALLAARGPEELCFTRLEDLYCFPEEASAGVGPNESFSQLEDEPMKLCRL 60
 DB 34 KFSKAAALLAARGPEELCFTRLEDLYCFPEEASAGVGPNESFSQLEDEPMKLCRL 92
 QY 61 HOAPTARGAIRPWCSLPTADTSSFPVLELRUTAAGAPRFRHVIHINEVLLDAPVGLYA 120
 DB 93 HQAPTVRGSVTFWCSLPADTSSFPVLELRUTAAGAPRFRHVIHINEVLLDAPVGLYA 152
 QY 121 RLADSGHVIRWLPPEPTMTSHIRFELDISAGNGAGSVORVELLEGRTECVLSNLRGR 180
 DB 153 RLADSGHVIRWLPPEPTMTSHIRFELDISAGNGAGSVORVELLEGRTECVLSNLRGR 212
 QY 181 TRITTAIVARAARPEPSFGFMSWSEPVSLTGG 214
 DB 213 TRITTAIVARAARPEPSFGFMSWSEPVSLTGG 246

RESULT 12
 ID AAR06511 standard; protein; 507 AA.
 XX AAR06511;
 AC AAR06511;
 XX
 DT 04-JAN-1991 (first entry)
 XX
 DE EPO receptor sequence deduced from DNA of clone 190.
 XX
 KW Erythropoietin; Diamond Blackfan anaemia; polycythemia vera.
 XX
 OS Mus musculus.
 XX
 FH Key Location/Qualifiers
 FT Peptide 1..24
 FT /label=signal peptide
 FT Domain 25..248
 FT /label=extracellular domain
 FT /note=EPO binding region
 FT 248..271
 FT Domain /label=transmembrane domain

FT Domain 272..507
 FT /label=intracellular domain
 FT Modified-site 75..77
 FT /label=N-linked-glycos
 FT Modified-site 182..184
 FT /label=N-linked-glycos
 PN WO9008822-A.
 XX
 XX 09-AUG-1990.
 PD
 XX
 XX 01-FEB-1990; 90WO-US00635.
 PF
 XX 03-FEB-1989; 89US-0306503.
 PR
 XX
 PA (GENE-) GENETICS INST. INC.
 PA (WHIT-) WHITEHEAD INST.
 XX
 PI D'andrea A, Wong G;
 XX
 DR WPI; 1990-260931/34.
 DR N-PSDB; AAQ05747.
 XX
 XX Erythropoietin receptor and gene - used for developing reagents
 PT and systems to control and study erythropoiesis.
 PS
 XX Disclosure: fig 1; 53pp; English.

The sequence was deduced from DNA from a clone isolated from a
 CC cDNA library prep. from uninduced murine erythroleukemia cells.
 CC It is a type I transmembrane protein with binding affinity for EPO.
 CC The gene and recombinant EPO receptor produced on expression of
 CC the DNA are used to develop reagents and systems to control and
 CC study erythropoiesis. It is believed that the EPO receptor is
 CC dysfunctional in individuals with Diamond Blackfan anaemia, and
 CC may be hyperactive in polycythemia vera.
 CC See also AAR06512 (human EPO receptor).
 XX
 SQ Sequence 507 AA;

Query Match 67.7%; Score 869.5; DB 11; Length 507;
 Best Local Similarity 77.7%; Pred. No. 4.4e-79;
 Matches 164; Conservative 22; Mismatches 24; Indels 1; Gaps 1;

QY 1 KFSKAAALLAARGPEELCFTRLEDLYCFPEEASAGVGPNESFSQLEDEPMKLCRL 60
 DB 34 KFSKAAALLAARGPEELCFTRLEDLYCFPEEASAGVGPNESFSQLEDEPMKLCRL 92
 QY 61 HOAPTARGAIRPWCSLPTADTSSFPVLELRUTAAGAPRFRHVIHINEVLLDAPVGLYA 120
 DB 93 HQAPTVRGSVTFWCSLPADTSSFPVLELRUTAAGAPRFRHVIHINEVLLDAPVGLYA 152
 QY 121 RLADSGHVIRWLPPEPTMTSHIRFELDISAGNGAGSVORVELLEGRTECVLSNLRGR 180
 DB 153 RLADSGHVIRWLPPEPTMTSHIRFELDISAGNGAGSVORVELLEGRTECVLSNLRGR 212
 QY 181 TRITTAIVARAARPEPSFGFMSWSEPVSLT 211
 DB 213 TRITTAIVARAARPEPSFGFMSWSEPVSLT 243

RESULT 13
 ID AAR47517 standard; Protein; 507 AA.
 XX AAR47517;
 AC AAR47517;
 XX
 DT 24-JUN-1994 (first entry)
 XX
 DE MEL EPO receptor.
 XX
 KW Erythropoietin receptor; recombinant; murine; anaemia.

Query Match	Best Local Similarity	Score	DB	Length
Matches 164; Conservative 22; Mismatches 24; Indels 1; Gaps 1	67.7%;	869.5;	DB 15;	507;
1 KRESKALLAAGPELLEFTEBERLELVCFEPFEPASAGVCPGNGFSFQLEDEPMWLCRL 60	77.7%;	Pred. No. 4.4e-79;		
34 kkeskaallaaasyseellcftqrlcdlycfeaaasgm-dfrsfsyglegsitkscl 92				
61 HOAPVARGAIFRMCSLPTADTSSFVLELRILAAAGAPPHRYTHINEVLLDAPGLVA 120				
93 hnapvrgsvrvtwscipcdtcsfvpdelyqveasgspryrlhinevllldapglia 152				
121 RLADSGHVIVIMLPEPETPMTSHIRFELDIDISNGNGAGSVORVELLEGTECVLSNLRGR 180				
153 rraegshvrltwlpppgapmtthrlryedvsagngnaggtqrvelegrtccclsnlrgg 212				
181 TRITIAVRRARMAEPFGGFWGSAWSEVSLIT 211				
213 trytltavarrmaeprsfqfwsawsepasllt 243				

Query Match	Best Local Similarity	Matches	Conservative	Mismatches	Indels	Gaps
1 KESKAALIAANGPELLCETFERLEDVCFEPEAASAGYGPNGNFSFQLEDEPMKLCRL	67.7%; Score 869.5; DB 16; Length 507;	164;	22;	24;	1;	
34 KESKAALIAANGPELLCETFERLEDVCFEPEAASAGYGPNGNFSFQLEDEPMKLCRL	77.7%; Pred. No. 4,4e-79;	164;	22;	24;	1;	
61 HOAPNARGAIRMWCSLIPADTSSVPLRLRLTAASGAPRFRHVIHNEVLLDAPVGLVA	77.7%; Score 869.5; DB 16; Length 507;	164;	22;	24;	1;	
93 HQAPNARGAIRMWCSLIPADTSSVPLRLRLTAASGAPRFRHVIHNEVLLDAPVGLVA	77.7%; Pred. No. 4,4e-79;	164;	22;	24;	1;	

QY 121 RLADSGHVIRLPPETPMTSHIRFELDISAGNGAGSVQREILLEGRTECVLSNLGR 180
 Db 153 rraeegshvirlwlpptgpmthlryevdvsagmragnrtgrveylegrtecvlsnlrg 212
 QY 181 TRITIAVARARMAEPSFGFSWAMSEPVSLT 211
 Db 213 trytlavararmaepsfsgfwsawsepasllt 243

RESULT 15

AAR50327
 ID AAR50327 standard; Protein; 507 AA.

AC AAR50327;

DT 19-OCT-1994 (first entry)

DE Mouse soluble EPO receptor protein.

KW Murine; soluble; erythropoietin; EPO; receptor protein; SEPO-R; drug;
 antigen; diagnostic agent; biochemical reagent.

OS Mus musculus.

Key Location/Qualifiers
 FT Modified-site 75..77
 FT /note= "N-linked glycosylation site"

PN JP06038787-A.

PD 15-FEB-1994.

PE 04-MAR-1992; 92JP-0082865.

PR 04-MAR-1992; 92JP-0082865.

PA (SNOW) SNOW BRAND MILK PROD CO LTD.

DR WPI: 1994-094847/12.

DR N-PSDB: AAQ44854.

PT Soluble erythropoietin receptor protein - and DNA coding for
 SEPO-R, useful as diagnostic reagent

PS Disclosure; Fig 1; 9pp; Japanese.

CC This sequence represents the murine soluble erythropoietin (EPO)
 receptor protein (SEPO-R). This protein is able to bind to EPO and
 has antigenicity as an EPO receptor. The molecular weight of the
 full length protein is pref 33 or 29 kd. The protein is useful as a
 drug, as a diagnostic agent and a biochemical reagent.

XX Sequence 507 AA;

Query Match 67.2%; Score 862.5; DB 15; Length 507;
 Best local Similarity 77.3%; Pred. No. 2.3e-78;

Matches 163; Conservative 22; Mismatches 25; Indels 1; Gaps 1;

QY 1 KFESKALLAARGPEELCTFERLEDVCFEEAASAGVGPNGFSFQLEDEPWKLCRL 60
 Db 34 kfeskaallaargseellctfqrledvcfweeasgmdfnyafsyqllegesrkscsl 92
 QY 61 HQAPFARCAIRFWCSLPTADSSFPPLRLTAAGARFRHVRHINEVYLIDAPVGLYA 120
 Db 93 hqaplvirgsvrfwscslptadstfplrlqyleaaspryhnlhinevilldapaglla 152
 QY 121 RLADSGHVIRLPPETPMTSHIRFELDISAGNGAGSVQREILLEGRTECVLSNLGR 180
 Db 153 rraeegshvirlwlpptgpmthlryevdvsagmragnrtgrveylegrtecvlsnlrg 212
 QY 181 TRITIAVARARMAEPSFGFSWAMSEPVSLT 211
 Db 213 trytlavararmaepsfsgfwsawsepasllt 243

Db 213 trytlavararmaepsfsgfwsawsepasllt 243

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